

Federal Energy and Water Management AWARDS 2014

Charles Brown, Chief Operator of the Fort Meade Water Treatment Plant (American Water), Dan Tobocman, Senior Engineer (American Water), and Tony Karwoski, Fort Meade Resource Efficiency Manager (Sain Engineering), at an electric power meter with a pulse kit connected to American Water's SCADA system.



H.G. Chissell, Anthony Karwoski, Dan Tobocman, Randy Williams U.S. Army Fort Meade, Maryland

In FY 2013 the U.S. Army Fort Meade worked with American Water, Viridity Energy, and Sain Engineering Associates to implement a project to respond to electric grid frequency fluctuations for the Fort's water filtration plant, saving about 2.3 billion Btu and \$75,000 in utility rebates annually. This was the first successful program at a large water filtration plant to use a new Source Control and Data Acquisition or SCADA system to optimally cycle the pump motors during grid frequency events without affecting water operations.

Meter pulse data kits and cable runs to the SCADA were installed, allowing the team to check high horsepower water pump motors and associated

electric meters in the field to retrieve real time interval data needed for demand response participation. When the system operator is contacted by the utility, some or all of the pumps can be cycled off as needed. System operators prepare for such events by choosing optimal times for pumping during off peak periods, with large water tanks pumped full overnight in preparation for daytime demand.

This project improves security, reducing the chances of a brownout while also reducing peak load and demand charges. The team is now working to expand the program to the wastewater side of operations for further savings.